

REMARKS

In response to the Office Action, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments.

Discussion of Claim Amendments

Independent Claims 1, 7, 11-13, 15-20, 25, 28-30, and 32-38 have been amended. Claims 59 and 60 have been added. Claims 1-60 are pending in this application. The amendments to the claims do not introduce any new matter. Entry of the amendments is respectfully requested.

Discussion of Claim Rejections Under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected Claims 1-4, 6-8, 11, 12, 16, 19-22, 24-26, 28-31, 33, 36, and 39-58 as being unpatentable over Kim et al. (U.S. Patent No. 5,777,680, hereinafter "Kim") in view of Chan et al. (U.S. Patent No. 5,812,197, hereinafter "Chan") and further in view of Bist et al. (U.S. Patent No. 6,043,844, hereinafter "Bist"). Claims 13-15, 17, 18, 32, and 34-35 were rejected as being unpatentable over Kim in view of Chan further in view of Bist, and further in view of Sun et al. (U.S. Patent No. 5,969,764, hereinafter "Sun"). Claims 5 and 23 were rejected as being unpatentable over Kim in view of Chan, further in view of Bist and further in view of Lee et al. (U.S. Patent No. 6,023,296, hereinafter "Lee"). Claim 9 was rejected as being unpatentable over Kim in view of Chan, further in view of Bist and further in view of Krause et al. (U.S. Patent No. 5,093,720, hereinafter "Krause").

Applicant respectfully disagrees with these rejections. Applicant respectfully submits that the cited art fails to teach or suggest at least one limitation from each of the above-listed claims.

Discussion of Patentability of Independent Claims 1, 7, 11-13, 15-20, 25, 28-30, and 32-36

The amended Claim 1 recites in part: "performing a second sub-encoding on the first sub-encoded block, the second sub-encoding adapting at least one encoding parameter based upon characteristic indicative of an energy content of the first sub-encoded part of the current frame, the characteristic being determined by prediction, without using the first sub-encoded block and

without using the set of blocks of the current frame, and at least in part from of the frames of the sequence only those frames that are a reference frame, wherein computing of the characteristic is based upon the time elapsed between the current frame and the reference frame or frames.” Applicant respectfully submits that Kim, Chan and Bist, alone or taken in combination do not teach the above-recited feature of Claim 1.

In contrast, Kim is generally directed video encoding system. In the Office Action on page 4, the Examiner acknowledged that “Kim fails to disclose the second sub encoding having a characteristic indicative of an energy content as claimed.” Chan also discloses a video encoding system. However, Chan does not teach that “at least one encoding parameter based upon characteristic indicative of an energy content of the first sub-encoded part of the current frame, the characteristic being determined by prediction, without using the first sub-encoded block and without using the set of blocks of the current frame.” In contrast, Chan describes a decision processor that adapts an encoding process while using data of the current frame. In particular, the decision processor of Chan creates decision criteria, “Correlation Factor (CF)”, that is used to select a macroblock during the encoding process. However, the value of CF is used from original pixel data of the current frame undergoing encoding. *See e.g.*, col. 6, lines 1-14. Bist is generally directed to a system and method for compressing and transmitting variable amounts of video data. Bist discloses that a characteristic indicative of energy content may be determined by prediction without using the original set of blocks within the current frame.

Compare the teachings of Kim, Chan and Bist with Claim 1, which recites “performing a second sub-encoding ... the second sub-encoding adapting at least one encoding parameter based upon characteristic indicative of an energy content ... wherein computing of the characteristic is based upon the time elapsed between the current frame and the reference frame or frames.” While Kim arguably teaches that the time between frames may be calculated because the quantization parameter calculated from parameters obtained from the first encoding step is directly reliant on the picture rate, Kim does not teach or suggest how that time calculation may be used. In contrast, Claim 1 recites that a second sub-encoding is performed using a characteristic which is computed based on the time elapsed between the current frame and the reference frame. Therefore, the second sub-encoding is performed using at least the time elapsed

between the current frame and the reference frame. Chan and Bist were cited merely to allegedly show certain other features of Claim 1 and they do not remedy the deficiencies of Kim.

Since Kim, Chan, and Bist taken alone or in combination wholly fail to disclose "performing a second sub-encoding ... the second sub-encoding adapting at least one encoding parameter based upon characteristic indicative of an energy content ... wherein computing of the characteristic is based upon the time elapsed between the current frame and the reference frame or frames." Applicant respectfully submits that Claim 1 is in condition for allowance.

Independent Claims 7, 11, 12, 13, 15-20, 25, 28-30, and 32-36 have been amended to include similar features. Applicant respectfully submits that Claims 7, 11, 12, 13, 15-20, 25, 28-30, and 32-36 are also in condition for allowance.

Discussion of Patentability of Claims 37-38

The Examiner has stated on page 8 of the Office Action that Claims 37-38 are allowed. Applicant has amended Claims 37-38. The amendments to the Claim are supported at least by lines 24-31 on page 22 of the application. Thus the amendments do not constitute new matter. Applicant respectfully submits that Claims 37-38 are in condition for allowance.

Discussion of Patentability of Dependent Claims

Dependent Claims 2-6, 8-10, 14, 21-24, 26, 27, 31, and 39-58 depend from independent Claims 1, 7, 11, 12, 13, 15-20, 25, 28-30, and 32-36, and further define additional technical features of the present invention. In view of the patentability of their base claims, and in further view of the additional technical features, Applicant respectfully submits that the dependent claims are patentable over the prior art references. Furthermore, Applicant does not necessarily agree with the characterizations of the prior art made by the Examiner in rejecting the dependent claims.

Discussion of New Claims

New Claims 59 and 60 depend from independent Claim 37 or 38 and further define additional technical features of the present invention. In view of the patentability of their base

claims, and in further view of the additional technical features, Applicant respectfully submits that the Claims 59 and 60 patentable over the prior art references.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In view of Applicant's foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.


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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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